Water Pollution Control Advisory Council (WPCAC) Meeting
July 6, 2005 12:30 p.m. – 3:00 p.m.
Director's Conference Room 111 Metcalf Building

Attendees:

Council Members:
Terry McLaughlin, Smurfit-Stone Container Corp.
Scott Seilstad
Peggy Trenk, Montana Assn of Realtors
Shannon Dunlap, Golden Sunlight Mines, Inc.
Robert Willems, Soil & Water Conservation District
Dave Schwarz
Don Skaar, Montana Chapter of American Fisheries Society

Other Attendees:
Bob Bukantis, Department of Environmental Quality (DEQ)
Bonnie Lovelace, DEQ
Chris Levine, DEQ
Claudia Massman, DEQ
Tom Reid, DEQ
Art Compton, DEQ
Patricia Ramos, Northern Cheyenne Environmental Protection Department (NC EPD)
Joe Walks Along Jr., NC EPD
Dwane Zimmerman, Nance Petroleum
Jesse Martin, Nance Petroleum
Jim Domino, Department Natural Resources and Conservation (DNRC)
William Walks Along, NC Tribe
Bob Kimball, CDM
Candace West, Department of Justice (DOJ)
Jay Bodner, MT Stockgrowers
Bruce Williams, Fidelity Exploration & Production (E&P)
Don Allen, WETA
Gail Abercrombie, MT Petroleum Assn.
Mike Bergstrom, Fidelity E&P
Tom Osborne, Hydrosolutions, Inc.

Call to Order

Chairman Terry McLaughlin called the Water Pollution Control Advisory Council meeting to order on July 6, 2005 at 12:30 p.m. A round of introductions was conducted.

Approval of Agenda

Terry McLaughlin asked for additions to the agenda. There were no changes or additions to the agenda.

A motion to approve the agenda as listed was made and seconded. The motion carried and the agenda was approved.

Approval of Minutes for May 5, 2005 Council Meeting

Terry McLaughlin said the Council received the draft minutes and had an opportunity to provide feedback/comment before this meeting. There were no comments or edits from the Council.

A motion to approve the May 5, 2005 minutes was made and seconded. The motion carried and the May 5, 2005 minutes was approved as written.

Action Items

"Water Beyond Methane" Petition for Rulemaking to the BER

Bob Bukantis said the petition process provides interested persons the right to request the Board of Environmental Review (BER) to promulgate rules. If the Board is petitioned, the Board then has a duty to either accept and go forward with rulemaking for that petition or deny it. The Board's decision needs to be done in writing based on record evidence. Record evidence is evidence and information presented by the petitioner and other interested persons to the Board. Information that is presented to the Board is part of a public review process. If the Board decides to accept the petition, then the normal rulemaking process would begin just as if the agency had approached the Board for rulemaking. The first step of the rulemaking process is to provide WPCAC the opportunity to review and comment on the petition. The Department will then provide WPCAC's comments to BER. At the July 29th Board meeting, the Board will decide whether to accept or deny the petition. If the proposed rule is accepted, then it will be published in the administrative register. As the process develops, there will be opportunity for public hearing, public comment and ultimately the Board will make the decision whether to amend or accept the rule. If the rule is accepted it will be published in the administrative register.

Electrical Conductivity (EC) is the ability of a solution of water to conduct electricity. EC is used as a practical measure of the amount of dissolved salts in water. The more dissolved salt in the water, the more dissolved ions, and the better the water conducts electricity. Flathead Lake water, which is clean water, has an EC of 120-140 $\mu S/cm^2$; the eastern part of the state has higher EC (Tongue River has an EC of ~800 $\mu S/cm^2$, Powder River is ~1,900 $\mu S/cm^2$ and CBM discharge water is ~2,000 $\mu S/cm^2$). These values tend to be highly variable in nature. The Department is concerned about EC to try to protect agriculture use. As EC and salt concentrations increase in the water, it reaches a threshold where if the salt concentrations are increased any further, the water will get too salty for the plants. This will result in a decrease in agriculture production or natural plant life because of the energy it takes for the plant to extract water out of a salty water solution.

Sodium Absorption Ratio (SAR) is the measure of the relative abundance of sodium compared to calcium and magnesium. SAR is a calculated value of sodium divided by the

square root of half the sum of calcium and magnesium expressed as milliequivalents. The Department is concerned about SAR because calcium and magnesium play an important role in holding soil structure together, particularly in clay soils. Sodium has the ability to displace calcium and magnesium from between the clay particles and cause different types of soils to expand to the point where it reduces the permeability of soils to water. In extreme cases if there is too high SAR water on soil, the soil will run when it is wet, eroding very easily or harden like concrete when it is dry. Average SAR values are as follows: Tongue River 1-3; Powder River 5; CBM discharge water ~40-60.

Water Quality standards are made up of three main components: beneficial use that is being protected; number or narrative statement used as a decision point on whether those beneficial uses are being protected; and the non-degradation policy which is used in permitting to appropriately protect water of better quality than the standards. Non-degradation is applied to any new or increased discharge that may cause any degradation of water quality. If there is a significant change in water quality, then the Department needs to go through a process to require an authorization to degrade the water quality. There is a provision in the rules for this but it has not yet been used. When the Department does the significance determination, the Department treats different categories of pollutants differently. In general the categories are carcinogens, toxins, harmful, and narrative. Carcinogens are not allowed any degradation of water quality or to be discharged. Toxins can increase by ambient water quality plus the pollutant to up to 15% of the standard before it is considered significant. If the existing water quality is already above the 15% limit of the standard no increase in the toxins will be allowed. For harmful parameters, the significance threshold can be as high as 50% without an authorization to degrade. The narrative standard does not typically have a hard number and the deciding factor determining if there is an opportunity to degrade is whether there is a measurable effect on aquatic life, ecological integrity of the stream or an adverse effect on beneficial use. The EC and SAR standards are set to protect agriculture and during the irrigation season the standards are set for a specific monthly average and a maximum for a sample. The non-degradation policy is the narrative approach and focuses on protecting the beneficial uses.

The first CBM permit was issued in 2000 and the Department began discussions and meetings to set water quality standards for EC and SAR. In 2001 the Department started working on draft standards and had draft standards out to the public in 2002. The approach the Department took on the standards was to generate numeric standards for EC and SAR to protect agriculture. The Department also decided to treat EC and SAR as narrative standards for purposes of non-degradation. In July 2002, the Department went to the BER and initiated rulemaking, proposing two different alternatives with a third petitioned alternative from irrigators. The Board directed the parties to enter into a collaborative process in hopes of working out much of the contention prior to final rulemaking. The collaborative process furthered the technical debate and discussion but an agreement was never met. In September 2002, the Board did a public tour and public meetings. In March 2003, the Board adopted the set of standards that is currently on the books. The standards were done for EC and SAR for the Tongue Powder and Rosebud drainages, with specific standards for specific waterbodies and seasonal standards to protect agriculture during irrigation season. The Board went with the narrative non-degradation approach with a provision for flow based permitting and a clause for seasonal adjustments for discharge volume to reflect increasing assimilative capacity during higher flows. There was also a provision called the non-severability provision where if the non-degradation approach and/or the flow based permitting approach were found in court to be

removed from the standards, then the whole ARM 17.30.670 package would be pulled out as well.

Permits are required for any discharge to state waters. As part of the permit process, the Department is required to protect water quality standards and sets effluent limits for all dischargers and the dischargers are left with the option of how to met those permit limits. There are two basic ways to determine permit limits: technology based and water-quality based. The technology-based approach is to not be as concerned about meeting the standards and the calculation as to see what the industry is capable of doing and how clean they can get that discharge with a given current technology and the technology the industry has available. EPA typically sets effluent limitation guidelines to help guide these types of permits. In the absence of EPA setting effluent limit guidelines, those guidelines according to the Clean Water Act are to be developed on a case-by-case basis using best professional judgment. In Montana BER has the responsibility of determining effluent limit guidelines on a case-by-case basis. The water quality based approach involves having the permit calculated in such a way as to meet all the water quality standards.

The current petition that was received by the Board asked for changes to the water quality standards. The three areas the petition asked for changes are: 1) to go from treatment of EC and SAR as a narrative approach for non-degradation to treating them as harmful; 2) to take the flow based permitting provision and replace that with a provision that would call for the use of an annual 7Q10 (the lowest 7-day flow every 10 years); and 3) remove the non-severability clause. A big part of the petition calls for new rules for minimum treatment requirements of discharge for the CBM industry. This would require re-injection of CBM discharge water into shallow aquifers where feasible. When it is not feasible to re-inject, the new rule provides a waiver, which would require treatment based, permitting approach for discharge. The new rule also provides specific timelines to allow for public review, public comment and to allow the Department time to make decisions. The new rule would allow for an exception for stock water use to allow for a third option of handling CBM discharge water.

Terry McLaughlin passed out a copy of the petition in the Department's rulemaking format and a letter sent to WPCAC from the Wyoming Department of Environmental Quality. Terry read the letter from Wyoming Department of Environmental Quality (see June 30, 2005 letter to Council).

Gail Abercrombie said that the MT Petroleum Association is opposed to this petition for rulemaking. A very extensive rulemaking process went on for two years that resulted in complex yet workable and protective water quality standards that were put into the books. The Association feels that these standards should be allowed to work. Some other opponents from the Association are here and can provide more technical information than what was brought to BER earlier.

Dwane Zimmerman said he is representing Nance Petroleum. Nance Petroleum has CBM mineral as well as conventional leases that they develop in eastern Montana and parts of Wyoming. Nance Petroleum is opposed to the petition. Nance Petroleum feels they need a toolbox of management methods for handling the water. Currently Nance Petroleum is developing on the Wyoming side of the Powder River basin where they use off channel impoundments for infiltration and evaporation. They have been successful with this method.

They are developing on one of the larger ranches in the Powder River basin in both Montana and Wyoming. The ranch likes this type of water management tools as it gives them an avenue to get water to their stock. Nance Petroleum is moving the water out of the creek channels to the ridges where the ranch can get their stock to utilize grass where they have not been able to in the past. The off channel pits is something Nance Petroleum has done a lot of science on. To date, Nance Petroleum has built 7-8 pits, have been permitted for 18 pits, and drilled ~100 monitoring wells. They drill monitoring wells in the alluvial systems to test the water to determine if the water from the pits is getting into the alluvium and to test the groundwater quality below the pits. Nance Petroleum tries to place their pits over Class IV waters, as the CBM water is higher quality.

Another method that has been looked at with limited success is injection. The injection sands and the formations in the area are channel sands, which are hard to drill and predict where they are and if they are found they have limited permeability and the sands are already saturated with water. Nance Petroleum does have two injection wells that are permitted with the Wyoming UIC program and have had limited success with them but are still ongoing with the long-term test on those wells. Less water is being put into the wells than what they were designed for and they do not look economic. Water treatment is a good option in some areas. In areas where the water is low quality to begin with then it is difficult to determine what level to treat the water at if it is going to be discharged into lower quality water.

Bruce Williams said he was here to represent Fidelity Exploration and Production Company. Fidelity is the largest natural gas producer in the state of Montana. Fidelity is currently the only commercial producer of CBM gas in Montana. There is not a need for enacting rules based on this petition at this time. There was an extensive process over a 2-year period in adopting the existing numeric standards that are currently in place for EC and SAR for the Powder River watersheds. It was a long process and there is no need to do it again. Regarding the graphs handed out in the package from Fidelity; the first graph is EC at the state line USGS gauging station. This graph shows the historical data before 1999 (which was before any CBM production), data from USGS station after 1999 and data from Fidelity. There is a relationship between flow and EC-the higher the flow the lower the EC. During the entire time of sampling there were only three points where flows were less than the 7Q10 that exceeded the monthly average standard. The second graph shows the same information for SAR at the same station. The third graph explains what happens with EC as you go farther down the Tongue River. There is some increase naturally in EC as you move downstream. The data at Miles City shows there is a wild excursion of EC that exceeds the 1000 EC standard. Those excursions only occur at points in time when most of the water has been taken out of the river and diverted into an irrigation system and is unrelated to CBM production.

The existing standards are working and do not need to be fixed. The petition is based on flawed science. Tom Osborne will talk about the ability to inject water and that it is not readily done. The suggestion to inject water back into the coal beds from which the gas is produced would not work. The pressure must be lowered in those coal beds in order to get the gas out and if the water were put back into them, it would raise the pressure back up and shut the valve on the gas. There is not a lot of places to inject the water and may have the unintended consequence of injecting the water into deep zones where this relatively good quality water is not usable. Fidelity uses a toolbox approach and is providing water to the two coalmines in the area for industrial purposes. Fidelity is discharging under the one MPDES permit for untreated discharge

that has been allowed in Montana. This permit limits discharge to 1,600 gallons/minute. With current flow, that is 1/10th of 1% of the flow rate of the river. At the 7Q10 flow it is 1.5-2% of the flow rate of the river.

The Department needs to consider what is good public policy. Numeric standards were put in place 2 years ago that are workable, are working, and are protecting the uses of the river and there is no need to change them. Mandating the use of uncertain technology like injection is not good technology. To adopt a rule that mandates that everything be injected until going through a feasibility study to show that injection can't be done and then requiring the water to be treated, when that may not be the best application in the location, does not work. There are about 16-20 thousand acres of irrigated agriculture in the Powder River basin, which is in an area of about 2.5 million acres. Fidelity believes that they have the responsibility to protect those 16 thousand acres of irrigated land but there is also the opportunity to enhance some of the other 2+ million acres of dry ranch land where this water can be provided to ranchers in unique ways that suit those individual ranches. Fidelity encourages the Council to not support this petition.

Harmon Ranney said he is representing Pinnacle Gas Resources, Powder River Gas, Rocky Mountain Gas, and Galaxy Energy Inc. These companies oppose this petition. Specifically Pinnacle Gas Resources has a 16 well pilot project in Big Horn County. They are currently treating the produced water prior to discharging it into the Tongue River. Water is discharged under the authority of a MPDES permit issued in January 2005. The current rules for SAR and EC were only adopted in 2003. This MPDES permit is the first permit to include these new rules. Pinnacle uses the Higgins Loop Counter Current Ionic Exchange technology to treat produced water. Pinnacle started discharging treated water in April 2005. Water quality analysis indicates that the discharge water meets all criteria in the permit. In the handout from Pinnacle, Table 1 indicates that the permit limits are being met. Rules adopted in 2003 led Pinnacle to treat the water and are meeting the newly adopted standards. These standards were agreed upon and are protective of all beneficial uses. These rules are working. The proposed rules in this petition are overly protective, extremely burdensome, and entirely unnecessary. Additionally, the current permit requires quarterly whole effluent toxicity tests, both chronic and acute, on a macroinvertebrate species and flathead minnows. There were no mortalities with one exception and that was a fish mortality in the 100% river water. Additionally, there was an increase in the reproducton of the macroinvertebrate in the higher concentrations of the discharge water. The discharge water improves the quality of the river. Table 2 shows that with the exception of potassium, Pinnacle is discharging higher quality water into the Tongue River. The Tongue River Water Users Association and the Tongue-Yellowstone Irrigation District, who removes water for irrigating in the Miles City area, are using this water. The current SAR and EC rules were the result of a significant collaborative effort. The result of the process was a compromise on both sides. The industry accepted that and went about the business of meeting the standards. The Council members are urged to not recommend this petition to BER and to allow the recently adopted standards to have a chance to show that they will work to protect all beneficial uses.

Don Allen said he was representing WETA. WETA members represent most of the folks involved in natural resource activities in Montana. It is in everyone's best interests that are part of the economic backbone of the state to have reasonably priced natural gas. People need a dependable and affordable natural gas supply. The energy bill going through Congress now has a lot of different parts about various ideas on ways to help make this country more self sufficient

with energy. On the other hand, we need to do what we can with what we have to work with. Natural gas is a clean burning fuel and yet is becoming very difficult for some to be able to figure out how to make it financially and make a profit from their business. Some of the agriculture groups are very concerned about the whole idea of where the natural gas prices are headed and have formed a group nationally to try to do something about it. One of the aspects of this is the cost and the ability for them to purchase fertilizer, which natural gas is used to manufacture. Whenever you have affordable and adequate supplies of energy it helps everyone. The members of WETA would agree that it is not necessary to go forward with this petition at this time and would ask this Council to recommend to the Board that they not move forward with this petition.

Tom Osborne said he is here from HydroSolutoins Inc. on behalf of Fidelity and opposes the petition. HydroSolutions has assisted Fidelity in performing baseline hydrology and groundwater characterizations of the Wasatch and Fort Union formations. HydroSolutions presented a handout to the Council explaining their opposition to the petition. The reason HydroSolutions is opposed to this petition is because it reflects a lack of understanding on the groundwater systems in the Wasatch and Fort Union formations, lacks science surrounding injection of produced water and does not provide any background on the reality of typical vertical separations between shallow groundwater used by farmers and ranchers and the deeper coal beds that are being produced for natural gas. There are a number of different aquifers in these formations in this area: alluvium, coal beds, clinker, and sandstone units. The bedrock units of these formations only provide a modest amount of groundwater and are not used for irrigation. The vast majority of farms and ranches tap into springs or wells that are in the upper 300 feet of the aquifers. CBM is only present where there is sufficient isolation from the surface and sufficient water pressure to hold the gas in place. Therefore it is not common to produce CBM from the same aquifers that farms and ranches usually rely on.

Coal beds are broken up by faults, which are vertical separations of the strata. The extent of the effect of the drawdown from pumping these coal beds during the gas production process is very limited by those faults. The petitioners really want to see this groundwater that is being produced re-injected into shallow aquifers where it can be used. This may be a logical goal but there are very serious limitations to this. All the units that would be injected into are already saturated and full of groundwater. In many cases the shallow groundwater is worse quality than the produced water and according to the rules CBM water cannot be put into these areas. Shallow aquifers cannot be pressurized very much according to EPA regulations because of the risk of creating cracks that would allow that water to propagate to the surface or other shallow aquifers. As far as injecting into depleted coal beds, it may be a possibility in the future but it is not a solution in the near future as there are no depleted coal beds yet. The sandstone is the target for injecting produced water but it is hard to find, is discontinuous, and fills up quickly.

Looking at four of the areas of development, it was discovered that less than 10% of the private wells are deeper than 300 feet, and less than 10% of the CBM wells are shallower than 300 feet. The overlap is quite small, so the concerns in the petition are based on a misunderstanding of what coal beds are going to be produced and exaggerated potential effects to farmers and ranchers. There is already an existing program administered by EPA that regulates underground injection. It would have to be seriously asked if the state of Montana should jump into a full regulatory program when a federal agency is already administrating a program that requires the same type of geologic and hydrologic information as is requested in the

petition. Although CMB gas does produce a lot of groundwater, in the long run the presence of these wells across the landscape may help farmers and ranchers. These wells will be there and will not be completely dewatered when CBM production ends. Farmers and ranchers at different locations and different depths can produce groundwater where none was historically produced before.

Don Skaar asked what conditions would be needed to re-inject into depleted coal seams?

Tom Osborne said it would probably have to be a field that had been depleted for several miles around and it is difficult to determine when this has occurred. Producers must also consider that when one mineral ownership ends, another begins. There would also have to be several miles around the depleted area to act as a buffer zone before re-injection could occur.

Joe Walks Along Jr. said he is here as the water coordinator for the Northern Cheyenne Tribe. At this time the Tribe is in support of this petition. The Tribe has met many challenges since 2002 when they applied, through EPA, for water quality standards. The Tribe feels that what they proposed is appropriate for the protection of the Tribe's water resources. The Tribe is currently looking at the long-term protection of their resources. There are a lot of short-term effects and many of them were heard today. This issue has turned into different issues, not only with water quality, but the Tribe is also being challenged in court on the land-based boundaries. The Tribe feels this is going to happen so the Tribe feels they must set standards that will ultimately protect that resource for as long as the Tribe is there on this land. The Tribe has been there a long time and plans on being there for a long time so they will protect their water resources. The Tribe asks the Council to advise BER to initiate rulemaking as the Tribe feels this petition will help protect that water resource.

The Tribe will get together with the appropriate departments and make comments scientifically, socially, and economically. These comments will also be brought to the Board. The Tribe feels it is in the best interest of their tribal membership to provide them with the best water quality in both the Tongue River and Rosebud drainages. The Tribe feels the water is sacred and should not be polluted in any manner. The Tribe's department is here help the Council make those decisions, and the decision was to protect that water resource. The Tribe is going about this by following the rules, going through the appropriate agency to do so, and with their technical assistance the Tribe has put these standards to scrutiny. The Tribe feels that what they have now proposed will support the petition and ultimately will support them in protecting the Tongue River and Rosebud Creek drainages.

To date, the Northern Cheyenne Tribe has not seen any benefits from CBM, and has only seen challenges to who they are, what they do, and how they live. The Tribe is going to protect all their resources, including water resources. The Tribe is going about this in the right way, have been advised this is the right way and will continue to do this until they have the appropriate regulations within the law books to protect the water. The Tribe does acknowledge the State's standards and tries to work with the State as best they can on a government-to-government relationship. The Tribe tries to work out a situation to an agreeable outcome. The Tribe will continue to do this with the State and hopes the best will come of it.

Allan Joscelyn said he is a lawyer here on behalf of Fidelity. The Council should recommend to the Board that this petition be denied for the very fundamental reason that the

petition and the rules the petition seeks to have adopted are not about water quality and are not required for water quality protection. This point is clearly illustrated by looking at an existing rule of the Department that was adopted in the CBM proceedings. This rule is the non-degradation rule (ARM 17.30.670(6)) that applies to CBM gas water, which says changes in existing surface or groundwater quality with respect to EC and SAR are not significant according to the criteria in 75-5-301(5)(C) of the Montana Code, provided that the change will not have a measurable effect on any existing or anticipated use or cause measurable changes in aquatic life or ecological integrity. Under that rule, anyone who thinks that a discharge of CBM water is having or will have an effect on water quality already has full legal authority to require enforcement of this rule requiring such changes in the discharge as are necessary to preclude any of those effects. Because that comprehensive authority to address any water quality effects of CBM gas water discharge already exists; authority that has never been invoked by anyone; this petition to adopt additional rules is not about protecting water quality. What it is about is the petitioners seeking through the Board to impose a particular mode of dealing with CBM water on CBM operators; the mode of re-injection. Imposition of a particular mode of disposition on that stint does not require protecting water quality and is not a water quality subject; it is a political subject. Neither this Council nor the Board is charged under its statuary jurisdiction with non-water quality political issues. For this reason, Fidelity believes that the Council should recommend to the Board that the petition is unnecessary and should be rejected.

Terry McLaughlin said it should be understood that this Council is not an advisory council to BER. This Council is charged as an advisory council to DEQ and there is no direct link to the Board.

Peggy Trenk asked if some of the issues being proposed for consideration in this rulemaking was discussed and considered as part of the rulemaking process 2 years ago or are they new issues?

Art Compton said that the issues of re-injection and treatment were not dealt with at the last rulemaking but the subject of non-degradation approach was dealt with. The Board elected to stay with the narrative standards for SAR and EC.

Terry McLaughlin said this is a very difficult issue and was dealt with over an extensive period. It is only 2005, and it is questionable whether a 2-year time frame from the imposition of standards to now is sufficient to assess the effectiveness of standards already in place and the permitting process that incorporates those standards. The Council had a similar issue at a previous meeting in regards to a time frame that involved 15 years for reclamation work. This issue was only 6-years in the process and the Council had determined that not enough time had been allowed to pass to determine what kind of benefits would come of those standards. Following that line of reasoning, 2-years is not sufficient time to go back in and start the process over again.

Shannon Dunlap said there was a lot of issues that were brought up that have not really been looked at. When talking about suitable geology for re-injection, suitable geology is defined as having to deal with water quality and nothing to do with porosity or permeability. How does

this relate if a location is determined to be suitable just on water quality but cannot get water into it?

Claudia Massman said that the definition for suitable geological formation was the water quality has to be similar to that of CBM water. The intent there was to have the water injected into shallow aquifers where the water quality was similar and it prevents producers from re-injecting into the deep wells where the water quality is not as good.

Don Skaar said that he neither understood nor was comfortable with having EC and SAR being considered non-significant. What is the defense of this system for permitting rather than what is done with everything else?

Art Compton said that what the Board did in response to the Department's recommendations at the last petition was to make the shift from a narrative standard for SAR and EC to a numeric standard but left the non-degradation threshold where it was for the narrative standard. With a classic approach to anti-degradation, in terms of what this petition is asking to do by classifying SAR and EC as harmful rather than having the narrative non-degradation threshold, it would lower the compliance threshold for SAR and EC to 50% of that standard. In arguing that the Board should go to a numeric standard but leave the non-degradation threshold at the narrative standard, the Department made two arguments: 1) the waters in the Powder River Basin (all the waters were lumped together) regularly exceed the standards naturally so the minimum application of a non-degradation rule may not be applicable; and 2) implementation of a traditional non-degradation approach that looked at a percentage of the numeric standard as a compliance threshold would be difficult to implement, difficult to comply with by the industries and difficult to enforce because it would take a lot of water quality monitoring using real time monitoring to cut the standard that finely. In the Boards findings adopted in the rule, the Board rejected the first justification because the Board found that the Tongue River does not regularly exceed the standards but it is the case for the Powder and Little Power Rivers. The Board did find merit in the second argument. This is why the non-degradation threshold was left at the narrative level.

Terry McLaughlin asked on page 67 of the petition where they identified the actual numeric criteria being proposed, what is the basis for the numeric values identified? On page 67 where it identifies that for the Powder and Little Powder River, the monthly average numeric value for EC is the same as the maximum one time limit, how can an average be the same as a maximum?

Bob Bukantis said that the values on page 67 of the petition are the existing water quality standards. The monthly average and maximum limit is the same for EC for these rivers in the current standards.

Chris Levine said the same type of arrangement for monthly average and maximum is in the tributaries. This is to ensure that the maximum was not exceeded during the non-irrigation seasons. These standards are to protect from ice flows that flood the irrigated lands adjacent to the river.

Terry McLaughlin asked on page 61 of the petition under treatment effluent limits, the calcium average concentration is identified as between 0.1 and 0.2 mg/L, why is there an effluent limit that fluctuates between two numbers that are only $1/10^{th}$ of a mg apart?

Bob Bukantis said that the Department cannot speak for the petitioners on this point.

Terry McLaughlin said that on page 20 of the petition under best achievable technology (BAT) it states "for BAT economic achievability is determined on the basis of total cost to the industry and the effect of compliance with BAT limitations on overall industry financial conditions." This section then goes on to state, "to demonstrate economic achievability, no formal balancing of cost or benefits is required. BAT's should represent a commitment of the maximum resources economically possible to the ultimate goal of eliminating all polluting discharges." This statement is contradictory because it does not allow for a cost benefit analysis when pursuing BAT. These statements say that the industry is supposed to total up all the costs to the industry in the assessment of a BAT yet the industry is not allowed to use this in balancing for a cost benefit analysis. Having a cost benefit analysis is meaningful to those who are potentially faced with having to bear the burden of the cost for implementing BAT technology if they don't get a fair shake by an assessment of what the benefit is measured against the total cost.

Dave Schwarz said he manages the Buffalo Rapids Irrigation District and the Powder River flows into this project. There have been water chemistry changes in the Yellowstone River that has never been observed before. This project has been in existence since the late 1930's. When pulling the pumps this past fall, there was a buildup of magnesium sulfate on the bronze pump impellers. Part of this was due to the low flow in the Yellowstone River but the SAR levels have risen. Typically SAR levels are at 1.4-2.5 but this fall the samples had SAR levels at 3.05. This is a concern because over half of the soils in this project are heavy and sensitive to any type of SAR level of 3. At the confluence of the Powder River with the Yellowstone River, there is a lowering of the EC right away, but because of the poor mixing qualities that water does not adequately mix until ~15 miles down stream.

Robert Willems asked how difficult would it be to administer this petition?

Bonnie Lovelace said there are issues of implementation in the petition that would need to be managed. EPA regulates the re-injection and if the Department went to the Class V injection system the Department is not delegated for that program so this would be adding to EPA's regulatory framework. The waiver process would be a new addition to the permit process, so there would be a lot of additional work and expertise required to make these determinations. The Department may not currently have the expertise or be able to free up the expertise with the Department's current workload. Writing individual permits for CBM discharge would follow the current permit process.

A motion was made and seconded to advise the Department that the Council's recommendation regarding this petition is to not accept the petition and to not initiate rulemaking at this time for the following reasons:

1) There has not been enough time to assess the effectiveness of the current standards since the current rules were adopted (2-years);
2) No technical information was provided justifying why the 100% re-injection method should be accepted;
3) No technical information was provided that evaluated the potential environmental impacts of the 100% re-injection method; and
4) No technical information was included in the petition showing that the current practices were harmful to the environment to require rewriting the rules at this point.

Scott Steilstad said that he favors the motion because with the information before the Council and listening to the discussion, there would be a lot of concerns and problems if this went forward.

Dave Schwarz said he would like to see the issue tabled to allow additional time to look into the questions that were brought up with the petition itself and get some explanations. He would like to see what kind of benefit this petition may or may not have.

A vote was taken on the motion that indicated the Council was not supportive of this petition being recommended for approval for rulemaking. Five members approved the motion and one disapproved the motion. The motion carries and is approved as written. The Council recommends the Department notify BER of the Council's motion indicating that it is premature that this petition be acted upon for rulemaking until additional time has lapsed so additional information can be collected and assessments conduced.

Agenda Items for Next Meeting

There were no suggested agenda items for the August 25th meeting.

Terry McLaughlin adjourned the meeting at 3:00 p.m.